

CLAIMS

1. A method of providing a user with access to a logical volume stored on at least one of a plurality of storage elements, the method comprising steps of:

determining an ELVID for the logical volume; and

5 providing the ELVID to the user; and

maintaining the same ELVID when the contents of the logical volume have been electronically moved to a new storage location in the storage elements.

2. The method of claim 1, wherein the step of determining comprises a step of assigning
10 an ELVID to the logical volume.

3. The method of claim 1, wherein the user is a host computer.

4. The method of claim 1, wherein the user is an individual account on a computer
15 system..

5. The method of claim 1, wherein the user is an application running on a host computer.

6. The method of claim 1, further comprising a step of maintaining a database of
20 ELVIDs stored on the plurality of storage elements.

7. The method of claim 6, wherein the maintaining step is performed on a host computer.

8. The method of claim 6, wherein the maintaining step is performed on a storage
25 management controller.

9. The method of claim 1, wherein the step of determining comprises a step of determining a logical volume identifier for a partition logical volume.

30 10. The method of claim 1, wherein the step of determining comprises a step of determining a logical volume identifier for a hyper-volume.

11. The method of claim 1, wherein the step of determining comprises a step of determining a logical volume identifier for a striped volume.

12. The method of claim 1, wherein the step of determining comprises a step of determining a logical volume identifier for each of a plurality of logical volumes.

13. The method of claim 1, further comprising a step of verifying that the user is permitted to access the logical volume.

14. The method of claim 1, further comprising a step of mapping the ELVID to a host configuration address.

15. The method of claim 14, wherein the ELVID corresponds to a format of a world wide name.

16. The method of claim 14, wherein the ELVID corresponds to a format of a network address for one of the storage elements and a logical unit identifier.

17. The method of claim 14, wherein the ELVID has a format corresponding to a format of a network address for one of the storage elements and a logical unit identifier.

18. The method of claim 1, wherein the step of determining comprises a step of assigning an ELVID to the logical volume.

19. The method of claim 1, wherein the logical volume was not created by the user and the step of determining comprises a step of providing an ELVID for a preexisting logical volume.

20. A method of accessing a logical volume stored on at least one of a plurality of storage elements, the method comprising steps of:

determining an ELVID for the logical volume; and
using the ELVID to access the logical volume.

21. The method of claim 20, wherein the step of determining comprises a step of mapping a host configuration address to the ELVID.

22. The method of claim 21, wherein the step of mapping comprises a step of using a database to translate the host configuration address to the ELVID.

23. The method of claim 20, wherein the step of using comprises a step of mapping the ELVID to a physical location address.

24. The method of claim 23, wherein the step of mapping comprises a step of using a database to translate the host configuration address to the ELVID.

25. The method of claim 20, wherein the step of using comprises a step of specifying the ELVID in a request to access the logical volume.

26. The method of claim 20, wherein the method is for a host computer to access the logical volume and wherein the step of using comprises a step of employing the host computer to map the ELVID to a storage location address.

27. A host computer for use in a computer system that includes a plurality of storage elements, the host computer comprising:
a processing unit; and
an ELVID interface module to translate requests for access to a logical volume to an ELVID for the logical volume.

28. The host computer of claim 27, further comprising a module to translate the ELVID to a physical storage location for the logical volume.

29. The host computer of claim 27, further comprising means for maintaining an ELVID database.

30. A host computer for use in a computer system that includes a plurality of storage elements, the host computer comprising:

a processing unit; and
an ELVID module to translate an ELVID for a logical volume to a physical storage location for the logical volume.

- 5 31. A storage management controller to manage access to data stored on a plurality of storage elements, the controller comprising:

an access management module to provide access to logical volumes stored on the storage elements by providing a physical storage address associated with an ELVID for the respective logical volumes.

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32. The storage management console of claim 32, further comprising an ELVID assignment module to assign ELVIDs to logical volumes.

33. A computer system, comprising:

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a plurality of host computers;
a plurality of storage elements; and
means for assigning ELVIDs to logical volumes to be accessed by the host computers and stored on the storage elements.

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34. The computer system of claim 33, further comprising:
means for using ELVIDs to access the logical volumes.

35. The computer system of claim 33, further comprising:
means for maintaining a database of ELVIDs for corresponding logical volumes.